

Appl. No. 09/875,311

Atty. Docket No. CM2373

Amdt. dated October 10, 2006

Reply to Office Action of July 7, 2006

Customer No. 27752

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for cleaning a surface, said process comprising the steps of:
 - (a) contacting the surface with an aqueous cleaning composition having a pH of less than 9, said cleaning composition comprising:
 - (i) a polymer which renders the surface hydrophilic, said polymer selected from the group consisting of polyvinyl pyrrolidone polymers, polyvinyl pyridine N-oxide polymers, and mixtures thereof; and
 - (ii) a nanoparticle clay mineral;[[,]] and
 - (b) then rinsing the surface with purified rinse water which is sprayed from a hand-held spray dispenser attached to a hose in communication with a source of tap water, said hand-held spray dispenser comprising a water purifying device which comprises an ion exchange resin, wherein the purified rinse water is prepared by the tap water passing through said water purifying device using a hand held sprayer that is attached to a garden hose when said sprayer is in use, said sprayer comprising a water purifier, which is a component of said sprayer when said sprayer is in use, wherein said purifier comprises ion exchange resin having a volume capacity between 4 in³ and 8 in³.
2. (Currently Amended) The process of Claim 1, wherein the surface is a soiled surface, further comprising a step of pre-wetting [[a]] the soiled surface prior to contacting the soiled surface with the cleaning composition.
3. (Currently Amended) The process of Claim 1 further comprising a step of rinsing the surface with the tap water between the steps step of contacting the surface with the cleaning composition and the step of rinsing the surface with purified rinse water.

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4. (Previously Presented) The process of Claim 1 wherein the surface is selected from the group consisting of: glass, plastic, metal, chrome metal, varnished or sealed surfaces, and an exterior surface of a vehicle.
5. (Currently Amended) The process of Claim 1 wherein the cleaning composition modifies the surface to render it hydrophilic, providing a contact angle between water and the surface of less than 80°.
6. (Currently Amended) The process of Claim 5 wherein the cleaning composition modifies the surface to render it hydrophilic, providing a contact angle between water and the surface of less than 40°.
7. (Currently Amended) The process of Claim 6 wherein the cleaning composition modifies the surface to render it hydrophilic, providing a contact angle between water and the surface of less than 20°.
8. (Previously Presented) The process of Claim 1 wherein the polymer is selected from the group consisting of: N-vinylimidazole N-vinylpyrrolidone (PVPVI) polymers, polyvinyl pyridine N-oxide (PVNO) polymers, quaternized vinylpyrrolidone/dialkylaminoalkyl acrylate or methacrylate copolymers and mixtures thereof.
9. (Currently Amended) The process of Claim 1 wherein the cleaning composition additionally comprises one or more components selected from the group consisting of surfactants, chelants, enzymes, builders, bleaching agents, soil release agents, disinfectants, brighteners, UV protectants, corrosion inhibitors and mixtures thereof.
10. (Canceled)
11. (Canceled)

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12. (Currently Amended) The process of Claim ~~[[11]]~~ 1 wherein ~~the purifying device comprises a device~~ the ion exchange resin is selected from the group consisting of: a single ion exchange resin, a mixture of ion exchange resins or layers of such resins, and a combination of mixed and layered ion exchange resins.
13. (Currently Amended) The process of Claim ~~[[11]]~~ 1 wherein the water purifying device comprises at least three layers of ion exchange resin.
14. (Currently Amended) The process of Claim ~~[[12]]~~ 1 wherein the ion exchange resin of the water purifying device produces a visual indication of depletion of purifying capacity of the ion exchange resin.
15. (Currently Amended) The process of Claim 1 wherein the cleaning composition ~~and purified rinse water are~~ is sprayed from a hand-held spray dispenser onto the surface.
16. (Currently Amended) The process of Claim 15 wherein the cleaning composition and the purified rinse water are sprayed from the same ~~spraying device~~ hand-held spray dispenser.
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)
21. (Canceled)
22. (Previously Presented) The process of Claim 1 wherein said cleaning composition further comprises a nonionic surfactant.

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23. (Previously Presented) The process of Claim 1 wherein said cleaning composition further comprises one type of surfactant, wherein said one type of surfactant consists essentially of one or more nonionic surfactants.
24. (Previously Presented) The process of Claim 23 wherein said one or more nonionic surfactants comprise alkyl polysaccharide surfactants.
25. (Canceled)
26. (Canceled)
27. (Currently Amended) The process of Claim 1 wherein after the surface is rinsed with purified water, the surface remains hydrophilic with a contact angle between water and the surface of less than 80° following at least one additional rinse.
28. (Currently Amended) The process of Claim 1 wherein after the surface is rinsed with purified water, the surface remains hydrophilic with a contact angle between water and the surface of less than 80° following at least three additional rinses.
29. (Currently Amended) The process of Claim 1 wherein after the surface is rinsed with purified water, the surface remains hydrophilic with a contact angle between water and the surface of less than 80° following at least five additional rinses.
30. (Canceled)
31. (Currently Amended) The process of Claim ~~[[11]]~~ 1 wherein said water purifying device comprises at least a strong acid cation ion exchange resin and a weak base anion ion exchange resin.
32. (Currently Amended) The process of Claim ~~[[11]]~~ 16 wherein ~~said cleaning composition is applied using a hose end spray device, wherein said purifying~~

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~~device is used in conjunction with said spray device, and said spray device also~~
said hand-held spray dispenser further comprises a container for storing the
cleaning composition.

33. (Canceled)

34. (Canceled)

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (New) The process of Claim 1 wherein said nanoparticle clay mineral has a
particle size from about 20 nm to about 30 nm.39. (New) The process of Claim 38 wherein said nanoparticle clay mineral is a
hydrous lithium magnesium silicate clay mineral.40. (New) The process of Claim 1 wherein said ion exchange resin comprises resin
beads having a diameter of less than about 1.0 mm.41. (New) The process of Claim 40 wherein said ion exchange resin comprises resin
beads having a diameter of less than about 0.4 mm.42. (New) The process of Claim 1 wherein said water purifying device comprises an
ion exchange resin having a volume capacity of no greater than 100 in³.43. (New) A process for cleaning an external surface of a vehicle, said process
comprising the steps of:

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- (a) providing a hand-held spray dispenser attached to a hose in communication with a source of tap water, said hand-held spray dispenser comprising:
- (i) a container for storing a cleaning composition, said cleaning composition comprising a polymer having at least one hydrophobic or cationic moiety and at least one hydrophilic moiety,
- wherein said hydrophobic moiety is selected from the group consisting of aromatic groups, C₈-C₁₈ linear or branched carbon chains, vinyl imidazole groups, and propoxy groups,
- wherein said cationic moiety is selected from any group that is positively charged or has a positive dipole, and
- wherein said hydrophilic moiety is selected from the group consisting of vinyl pyrrolidone groups, acrylic acid groups, methacrylic acid groups, maleic acid groups, and ethoxy groups;
- (ii) a water purifying device comprising an ion exchange resin, wherein purified rinse water is prepared by the tap water passing through said water purifying device; and
- (iii) a system enabling a user to switch between spraying the cleaning composition, spraying the purified rinse water, and spraying the tap water, all from the same hand-held spray dispenser;
- (b) spraying the external surface of the vehicle with the cleaning composition from the hand-held spray dispenser; and
- (c) then rinsing the external surface of the vehicle with the purified rinse water from the hand-held spray dispenser.

44. (New) The process of Claim 43 further comprising a step of rinsing the external surface of the vehicle with the tap water between the step of spraying the external surface of the vehicle with the cleaning composition and the step of rinsing the external surface of the vehicle with the purified rinse water.

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45. (New) The process of Claim 43 wherein said polymer is selected from the group consisting of polyvinyl pyrrolidone polymers, polyvinyl pyridine N-oxide polymers, and mixtures thereof.
46. (New) The process of Claim 43 wherein said polymer is selected from the group consisting of N-vinylimidazole N-vinylpyrrolidone (PVPVI) polymers, polyvinyl pyridine N-oxide (PVNO) polymers, quaternized vinylpyrrolidone/dialkylaminoalkyl acrylate or methacrylate copolymers and mixtures thereof.
47. (New) The process of Claim 43 wherein the cleaning composition further comprises a nanoparticle clay mineral.
48. (New) The process of Claim 47 wherein said nanoparticle clay mineral has a particle size from about 20 nm to about 30 nm.
49. (New) The process of Claim 43 wherein the cleaning composition stored in the container is mixed with tap water within the hand-held spray dispenser, such that the cleaning composition further comprises tap water prior to the cleaning composition being sprayed on the external surface of the vehicle.